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PATENT  
TESSERA 3.3-008 CIP DIV CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of :  
DISTEFANO, et al. :

Application No. 09/534,939 :

Filed: March 24, 2000 :

For: P-CONNECTION COMPONENTS :  
WITH FRANGIBLE LEADS AND BUS :

Group Art Unit: 2814

Examiner: D. Graybill

Date: May 14, 2001

Commissioner for Patents  
Washington, D.C. 20231

X

AMENDMENT

Sir:

In response to the Official Action mailed February 15, 2001, Applicants submit the following amendments and remarks.

IN THE CLAIMS

CLEAN COPY OF AMENDED CLAIMS:

18. (Amended) The component as claimed in claim 17, wherein said buses are connected to one another so that said buses cooperatively form a structure on said peripheral portion substantially surrounding said central portion and said slots.

19. (Amended) The component as claimed in claim 18, wherein said slots are connected to one another to form substantially continuous channel surrounding said central portion, said central portion being connected to said peripheral portion only through said leads, whereby said central portion will be detached from said peripheral portion upon breakage of said frangible sections.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class mail in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231 on May 14, 2001.

(Signature)

Stephen B. Goldman

Typed or Printed Name of Person Signing Certificate

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Insert new claims 20-25, as follows:

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20. (NEW) The component of claim 1, wherein said support structure comprises a unitary support.

21. (NEW) The component of claim 20, wherein said unitary support comprises a layer of dielectric material.

42 22. (NEW) The component of claim 1, wherein said frangible section is mechanically weaker than said first and second ends of said connection section, whereby said frangible section is disconnectable from one of said first and second ends upon application of a force to said connection section.

23. (NEW) The component of claim 22, wherein said frangible section is disposed overlying said gap between said first and second ends.

24. (NEW) The component of claim 1, wherein said frangible section is disposed overlying said gap between said first and second ends.

25. (NEW) The component of claim 1, wherein said first and second ends of said connection section are joined together by said frangible section overlying said gap, at least one of said first and second ends of said connection section is displaceable within said gap relative to said support structure upon severing said frangible section while leaving a remainder of said connection section intact.

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MARKED-UP COPY OF AMENDED CLAIMS:

18. (Amended) The component as claimed in claim 17, wherein said buses are connected to one another so that said buses cooperatively form a ~~heap-like~~ structure on said peripheral portion substantially surrounding said central portion and said slots.

19. (Amended) The component as claimed in claim 18, wherein said slots are connected to one another to form substantially continuous channel surrounding said central portion, said central portion being connected to said peripheral portion only through said leads, whereby said central portion will be detached from said peripheral portion upon breakage of said frangible ~~elements~~ sections.

REMARKS

This Amendment is in response to the outstanding Official Action dated February 15, 2001, the shortened statutory period for filing a response being set to expire on May 15, 2001. In view of the above amendments and within remarks, reconsideration of the Examiner's rejection is respectfully requested.

The Examiner has rejected claims 1-19 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. As to claim 18, the Examiner has objected to the term "hoop-like" as being unclear. Applicants have deleted the term "hoop-like" as the term is a non-essential feature of the claim. The Examiner has also objected to the term "said frangible elements" in claim 19 as lacking sufficient literal antecedent basis. Applicants have amended the term to "said frangible sections" thereby providing the literal support for the term.

The Examiner has also rejected claims 1, 6, 7, 15, 16 and 19 contending that the term "frangible" is a vague relative term of degree. The term "frangible" is well recognized in the art of connectors for microelectronic components and the like. There are numerous issued patents having claims to leads including a frangible section which have been issued. By way of example, the Examiner is directed to U.S. Patent No. 6,054,756. It is noted that the '756 Patent was examined and allowed by the same Examiner of the present application without objection to the term "frangible." The present application is a continuation of the '756 Patent. Accordingly, without more, the Examiner's rejection is traversed and should therefore be withdrawn.

The Examiner has rejected claims 1 and 4-16 under 35 U.S.C. §102(b) as being anticipated by Angelucci, Sr., et al., U.S. Patent No. 4,380,042; claims 1 and 17-19 under 35 U.S.C.

§102(e) as being anticipated by Hayward, et al., U.S. Patent No. 4,801,999; and claims 1-3 under 35 U.S.C. §102(e) as being anticipated by Nelson, U.S. Patent No. 5,459,634. Of the pending claims, claim 1 is the sole independent claim, claims 2-19 being presented in dependent form, as well as newly submitted dependent claims 20-25. In view of the within remarks, the Examiner's rejection is considered traversed and should therefore be withdrawn.

Turning to Applicants' independent claim 1, the invention as stated by the preamble is directed to a mounting component for a semiconductor chip. As such, claim 1 is directed to the features of the mounting component and not the features of the semiconductor chip. The claimed mounting component includes a support structure having a top surface, a bottom surface and a gap extending through the support structure between the aforementioned surfaces. The claimed support structure is therefore an element of the mounting component and not an element of the semiconductor chip to which the mounting the component is ultimately connected. Accordingly, the claimed electrically conductive leads which extend across the gap have ends disposed on the support structure of the mounting component on either side of the gap, which leads include a frangible section.

Referring to Angelucci, Sr., et al., this reference teaches in Figs. 3 and 4 a tape 20 having a hole 26 with leads 25 projecting inwardly from the outer edges of the hole. Positioned within the hole is a semiconductor device 28. The innermost ends of the leads are joined to a ring-like structure 32 on the semiconductor device through a tear link 36. After bonding to the contacts 30 on the semiconductor device 28, the ring-like structure is removed by breaking at the tear link 36. Accordingly, one end of the lead is supported by tape 20, while the other end of the lead is supported by the semiconductor device 28 which is positioned within hole 26. There is no

disclosure in Angelucci, Sr., et al. of a lead extending across a gap in a support structure of a mounting component, but rather, only a lead extending across a gap formed between a tape and a semiconductor device.

The Examiner states that the support structure disclosed in Angelucci, Sr., et al. includes elements 20 and 28. However, as noted by Applicants, element 28 is a semiconductor device and not part of Applicants' claimed support structure which is an element of the mounting component and not an element of the semiconductor chip to which the mounting component is attached. Accordingly, the Examiner has improperly interpreted Angelucci, Sr., et al. as disclosing a support structure having a gap over which a lead is attached on opposite sides thereof. This claimed element of Applicants' invention is not anticipated by Angelucci, Sr., et al.'s disclosure of a lead extending across a gap between a portion of a tape and a semiconductor device, as the semiconductor device is not part of the support structure of the mounting component. Angelucci, Sr., et al. fails to disclose a mounting component including a support structure having a gap therein which is bridged by leads having ends attached to the support structure on either side of the gap. Accordingly, the Examiner's rejection is considered traversed and should therefore be withdrawn.

Turning to Hayward, et al., here again, the Examiner is interpreting the integrated circuit chip 160, see Fig. 7, as part of Applicants' claimed support structure. Hence, like Angelucci, Sr., et al., Hayward, et al. is incapable of anticipating Applicants' claimed invention as not disclosing the aforementioned features as set forth in independent claim 1. The interpretation of Applicants' support structure as readable upon the chip of Hayward, et al. is an impermissible interpretation as the claimed support structure is an element of the claimed

mounting component, and not the semiconductor chip to which the mounting component is attached.

The Examiner specifically acknowledges that Hayward, et al. also does not teach a frangible section as claimed by Applicants. To this end, the Examiner states that this is an inherent property of the leads of Hayward, et al. because the leads can be readily or easily broken. The teachings of Hayward, et al. does not support the Examiner's position as there is no disclosure in Hayward, et al. of the leads having a frangible section to be breakable thereat. The Examiner has made no reference to any portion of Hayward, et al. as disclosing a lead which extends over a gap in a support structure having a frangible section or one which is readily or easily broken. The fact is that Hayward, et al. does not teach or even suggest Applicants' lead having a frangible section, nor is any such feature inherent in what is disclosed in Hayward, et al. An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention. *ATD Corp. v. Lydall, Inc.* 48 USPQ2d. 1321 (Fed. Cir. 1998). As stated in *In Re Newell*, 13 USPQ2d. 1248 (Fed. Cir. 1989), a retrospective view of inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements in the particular claimed combination. Here, there is certainly no teaching or suggestion in Hayward, et al. of a lead having a frangible section as claimed by Applicants. Accordingly, the Examiner's rejection is considered traversed and should therefore be withdrawn.

Turning to Nelson, et al., see Fig. 3, there is disclosed a multiple window TAB tape having signal leads 26 spanning windows 24 within the tape at the periphery of a chip designated area, ground leads 28 spanning windows 32 within the

tape and power leads 30 spanning windows 34 within the tape. The ground and power leads as expected are connected to ground and power buses. When the disclosed structure is connected to integrated circuit die 40, all of these leads remain intact and in place on the TAB tape. None of these leads has an end which is detached or displaced via a frangible section. The Examiner recognizes that Nelson, et al. does not explicitly teach a frangible section. However, as in the case of Hayward, et al., the Examiner states that this an inherent property of the leads because the leads can be readily or easily broken. Here again, for those reasons set forth with respect to Hayward, et al., the Examiner's rejection based on what is admittedly not disclosed in Nelson, et al. cannot be supported by the reference which actually teaches away from Applicants' claimed invention, i.e., where the leads are not broken or detached from their support structure. It is clear from the teachings of Nelson, et al. that the leads do not include a frangible section nor is any frangible section or easily breakable lead contemplated or desired in the interconnecting device of Nelson, et al. Accordingly, the Examiner's rejection is considered traversed and must therefore be withdrawn.

Turning to Applicants' newly proposed claims 20-25, these claims further distinguish claim 1 over the prior art cited by the Examiner. More particularly, claim 20 is directed to the support structure comprising a unitary support, and comprising a layer of dielectric material as set forth in claim 21. The frangible section, as set forth in claim 22, is mechanically weaker than the first and second ends of the connection section, and wherein the frangible section is disposed over the gap as set forth in claims 23 and 24. Finally, claim 25 includes the frangible section overlying the gap wherein at least one of the first and second ends of the connection section can be displaced within the gap relative to the support structure by severing the

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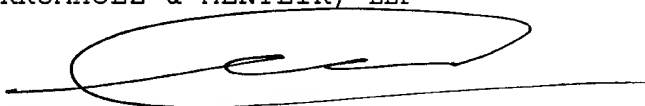
frangible section while leaving the remainder of the connection section intact. Nowhere does the art of record teach or suggest the aforementioned claimed limitations.

In considering Applicants' within response, Applicants also designate the remaining dependent claims as being allowable by virtue of their ultimate dependency upon submittedly allowable independent claim 1. Although Applicants have not separately argued the patentability of each of the dependent claims, Applicants' failure to do so is not to be taken as an admission that the features of the dependent claims are not themselves separably patentable over the prior art cited by the Examiner.

As all issues raised by the Examiner have now been overcome, Notice of Allowance is respectfully requested. If, for any reason, the Examiner is of the opinion that such action cannot be taken at this time, he is invited to telephone the undersigned at (908) 654-5000, so as to overcome any additional issues that may need resolution. If there are any fees to be incurred in connection with this response, the Examiner is authorized to charge Deposit Account No. 12-1095.

Respectfully submitted,

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